



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

August 6, 2004



National Aeronautics and  
Space Administration

### Upcoming Events:

- Thermal Control System (TCS) Delta Critical Design Review ( $\Delta$ CDR) - October 18 - 19, 2004 – JSC
- AMS General TIM - October 20 - 22, 2004 – JSC
- STA Vacuum Case Delivery (on dock at STADCO) - October 13, 2004
- Flight Vacuum Case Delivery (on dock at STADCO) - December 11, 2004
- AMS General TIM - January 10 - 14, 2005 – KSC
- AMS-02 Avionics Functional Interface Test (FIT) - January 2005
- Tracker Thermal Control System (TTCS) PDR - January 2005, CDR - April 2005
- AMS-02 Phase II Safety Review - March 2005 - JSC

### Upcoming Tests:

- O-Ring Test Fixture (OTF) Vacuum Test - On going - J13
- Interface Plate Static Test - Date TBD - Location TBD
- Lower Joint Static Test - Date TBD - Location TBD
- STA Acoustic Test - Date TBD - ESTEC - Noordwijk, Netherlands (Schedule under review)
- STA Sine Sweep Test - Date TBD - INFN - Terni, Italy (Schedule under review)
- Full Assembly Modal & Static Tests - Date TBD - IABG - Munich, Germany

### Status:

- Lockheed Martin (LM) Alpha Magnetic Spectrometer (AMS) personnel supported the inaugural meeting of the AMS-02 Configuration Control Board (CCB) on August 4, 2004. LM personnel prepared and presented introductory presentations and led discussions on MRB Authority for AMS at JSC, LMSO, and within the AMS Collaboration; Closeout Photo Requirements for AMS



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

August 6, 2004



National Aeronautics and  
Space Administration

Integration; Risk Management Plan Scaling Options; and Development of the AMS-02 Master Verification Plan . The two documents [Project Plan and Configuration Management Plan (CMP)] on the agenda to be baselined at the CCB were deferred to a CCB scheduled for August 18 to provide sufficient time for the mandatory evaluators to review.

- LM designers and engineers are reviewing the design of the AMS-02 Vacuum Case Test Fixture (VCTF) to simplify manufacturing and reduce cost. Design reviews are being coordinated with the Structural Analysis Group to ensure that the modified design will still meet all structural requirements. Work is continuing on the VCTF drawings with a goal of having all drawings released and ready for fabrication by November 1, 2004 to support the AMS program schedule for Cryomagnet testing.
- Several Assembly Fixture Drawings were redlined to resolve manufacturing issues with the large plates that bolt together to form the Assembly Fixture. The final plate thickness tolerance was adjusted to allow for skim cutting the stock plate. This skim cutting will provide a flat datum reference for the interfaces that are machined into the face of the plate.
- The remaining Assembly Fixture piece part drawing numbers were provided to Rothe Joint Venture (RJV) Planning for incorporation into the existing Virtual Work Authorization Request (VWAR) for the Assembly Fixture .
- Vacuum Case Activity at STADCO
  - Negotiations with STADCO to resolve issues with their responses and schedules are ongoing. Support was requested from the LMSO Procurement Manager for assistance in dealing with the schedule slips, inaccurate milestone schedules from the vendor, and responsiveness issues dealing with Vacuum Case (VC) fabrication issues. As a result, the VC lead engineer is scheduled to travel to STADCO the week of August 16 for face-to-face discussions with the vendor to resolve the issues.
- Vacuum Case Milestones
  - First Article Conical Flange Complete - July 2004
  - Weld Fixture Complete - August 2004
  - STA Support Rings Complete - August 2004
  - Weld Development Complete - August 2004
  - STA Conical Flanges Complete - August 2004



Alpha Magnetic Spectrometer  
NASA / DOE

## Alpha Magnetic Spectrometer Weekly Reports

**August 6, 2004**



National Aeronautics and  
Space Administration

- Shipping Fixture Complete - August 2004
- STA Line Drill Operations Complete - August 2004
- Flight Support Rings Complete - September 2004
- First Article Weld Complete - September 2004
- Flight Conical Flanges Complete - September 2004
- STA Match Drill Procedure Complete - September 2004
- STA Weld Complete (for proof test @ STADCO) - September 2004